

WHAT IS CLAIMED IS:

- Claim 1      A resilient mattress, comprising:
- a latex foam body; and
  - a plurality of resilient units spaced within the latex foam body such that portions of the latex foam body are arranged between adjacent resilient units to firmly maintain the resilient units within the latex foam body, each resilient unit including a coiled spring individually enclosed within a respective envelope impermeable to the latex foam body.
- Claim 2      The resilient mattress of claim 1, wherein each of the resilient units has respective characteristics that define a load bearing capacity of the resilient unit, the latex foam body being divided into a plurality of differentiated load bearing zones, resilient units having similar load bearing capacities being arranged in the same load bearing zone of the latex foam body.
- Claim 3      The resilient mattress of claim 2, wherein the load bearing capacities of the resilient units in each load bearing zone are selected in accordance with the weight of a human body portion expected to rest on the load bearing zone.
- Claim 4      The resilient mattress of claim 3, wherein the characteristics include at least one of a form of the coiled spring, dimensions of the coiled spring, a number of coils of the coiled spring, a diameter of the coiled spring, and a material of the coiled spring.
- Claim 5      The resilient mattress of claim 2, wherein the differentiated load bearing zones define respective load bearing bands that extend transversely to a longitudinal extension of the latex foam body.

- Claim 6      The resilient mattress of claim 5, wherein each load bearing band has a respective position and a respective width, the position and the width of each load bearing band being selected in accordance with characteristics of a human body portion expected to rest on the load bearing band.
- Claim 7      The resilient mattress of claim 6, wherein the number of load bearing bands is selected in accordance with the number of human body portions expected to rest on the latex foam body.
- Claim 8      The resilient mattress of claim 6, wherein the characteristics include a position and a width of the human body portion expected to rest on the load bearing band.
- Claim 9      The resilient mattress of claim 1, wherein the latex foam body has a surface and a plurality of first channels respectively assigned to and aligned with the plurality of resilient units, each of the first channels extending perpendicularly from the surface of the latex foam body to the assigned resilient unit.
- Claim 10     The resilient mattress of claim 9, wherein the first channels are arranged in parallel rows.
- Claim 11     The resilient mattress of claim 9, wherein the latex foam body has a plurality of blind second channels, the second channels not being aligned with the plurality of resilient units and extending perpendicularly from the surface of the latex foam body to positions within the latex foam body, wherein the second channels vary a density of the latex foam body.
- Claim 12     The resilient mattress of claim 11, wherein the second channels are arranged in parallel rows.

- Claim 13      The resilient mattress of claim 11, wherein the latex foam body includes a plurality of side walls and a plurality of blind third channels extending from the side walls to positions within the latex foam body, the blind third channels extending in a direction substantially parallel to the surface of the latex foam body.
- Claim 14      A mold for manufacturing a resilient mattress, including a latex foam body; and a plurality of resilient units spaced within the latex foam body such that portions of the latex foam body are arranged between adjacent resilient units to firmly maintain the resilient units within the latex foam body, each resilient unit including a coiled spring individually enclosed within a respective envelope impermeable to the latex foam body, wherein the latex foam body has a surface and a plurality of first channels respectively assigned to and aligned with the plurality of resilient units, each of the first channels extending perpendicularly from the surface of the latex foam body to the assigned resilient unit the mold, and the latex foam body has a plurality of blind second channels, the second channels not being aligned with the plurality of resilient units and extending perpendicularly from the surface of the latex foam body to positions within the latex foam body, the mold comprising:
- a bottom section having a plurality of first pins; and
  - a cover having a plurality of second pins;
- wherein a first number of the first and second pins are configured to align with the resilient units to form the first channels within the latex foam body while molding the resilient mattress, and a second number of the first and second pins are configured not to align with the resilient units to form the blind second channels in the latex foam body while molding the resilient mattress.
- Claim 15      The mold of claim 14, wherein at least one of the bottom section and the cover includes a plurality of detachable third pins extending in a direction substantially

perpendicular to the first and second pins for introducing a plurality of blind third channels into the latex foam body.

Claim 16      The mold of claim 14, further comprising a detachable wall unit to divide the latex foam body into first and second latex foam bodies for allowing the manufacture of two of the resilient mattresses of claim 11.